



Armed Forces College of Medicine AFCM



Pleura

Submandibular & Sublingual Glands

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Ass. Prof of Anatomy

INTENDED LEARNING OBJECTIVES (ILO)



By the end of this lecture the student will be able to:

1. Describe the shape, , position, surfaces, relations of submandibular salivary gland
2. Describe course and site of opening of submandibular duct
3. Discuss nerve and blood supply of the submandibular gland
4. Describe position , relations , ducts , nerve and blood supply of sublingual salivary gland

Key points



1. Anatomical features of submandibular gland

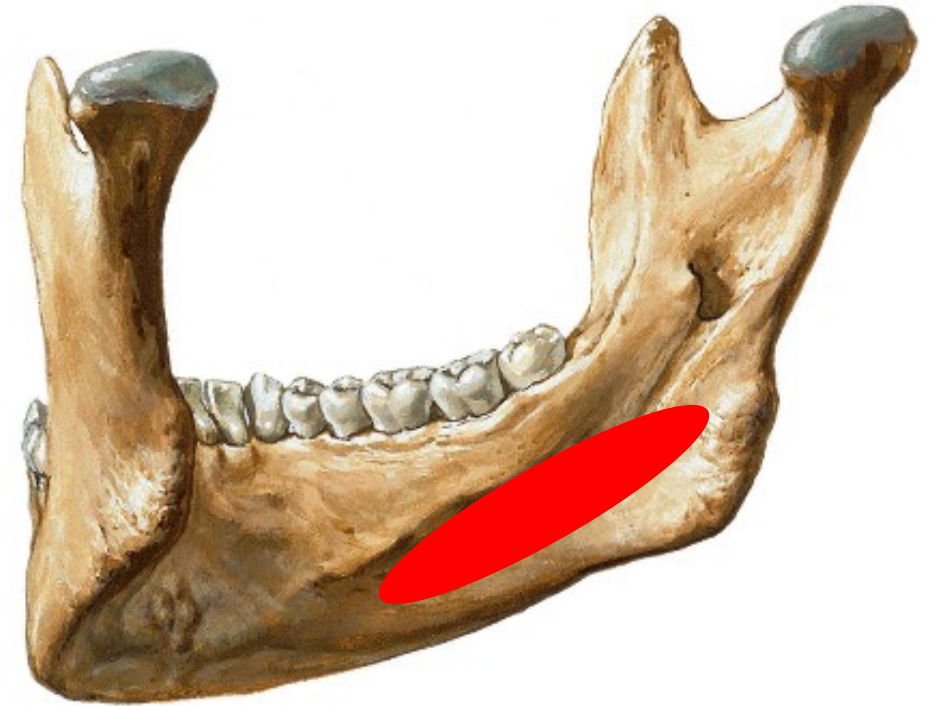
2. Anatomical features of sublingual gland

Submandibular Gland



- **Position:**
Lodged in the submandibular fossa of the mandible
- **Shape:** wedge shaped.

Size: is about the size of a walnut.

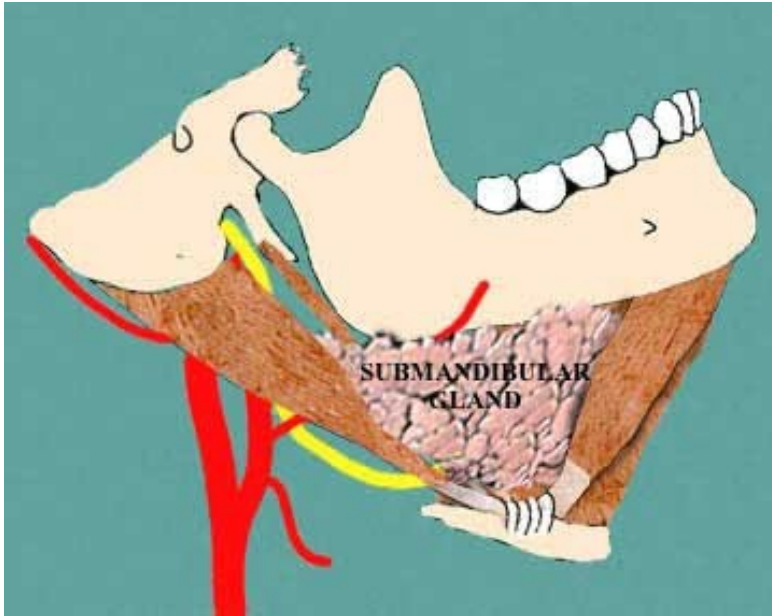


Atlas of human anatomy by Frank H. Netter, 6th Edition

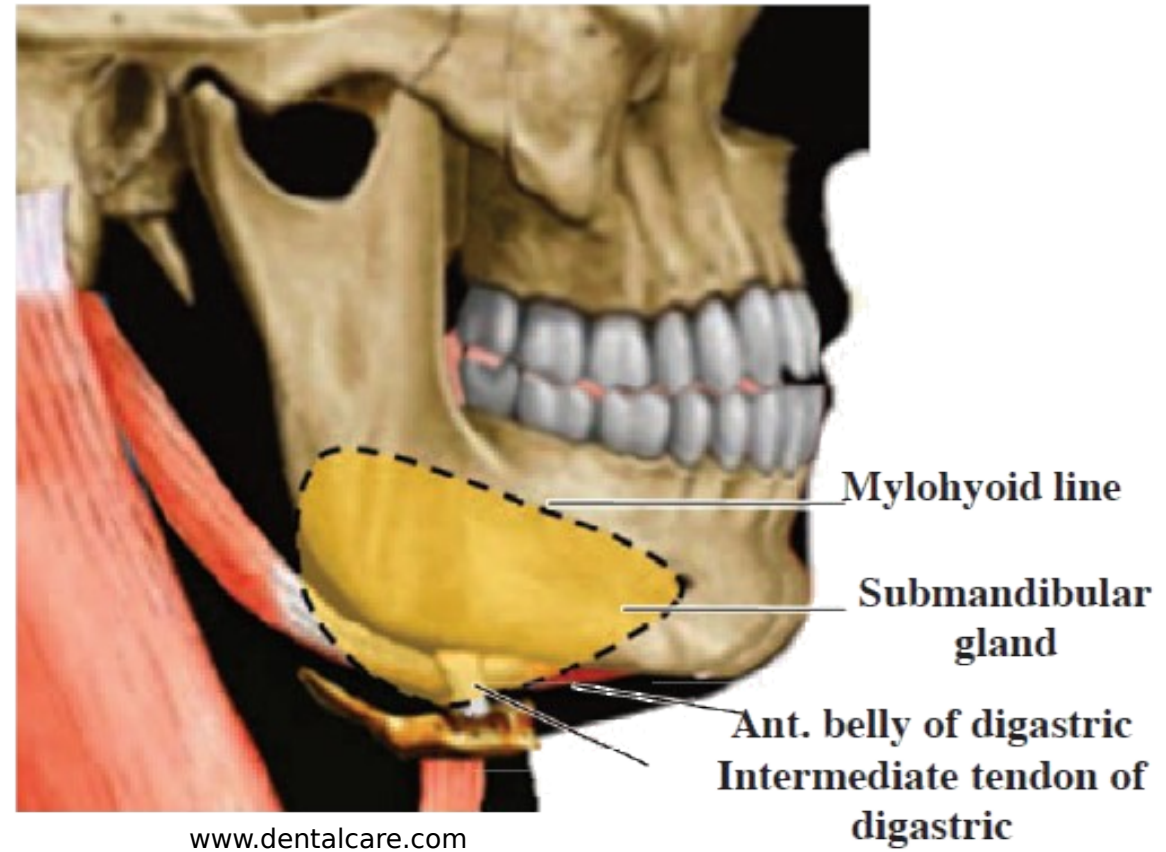
Submandibular Gland



Extent



www.wesnorman.com

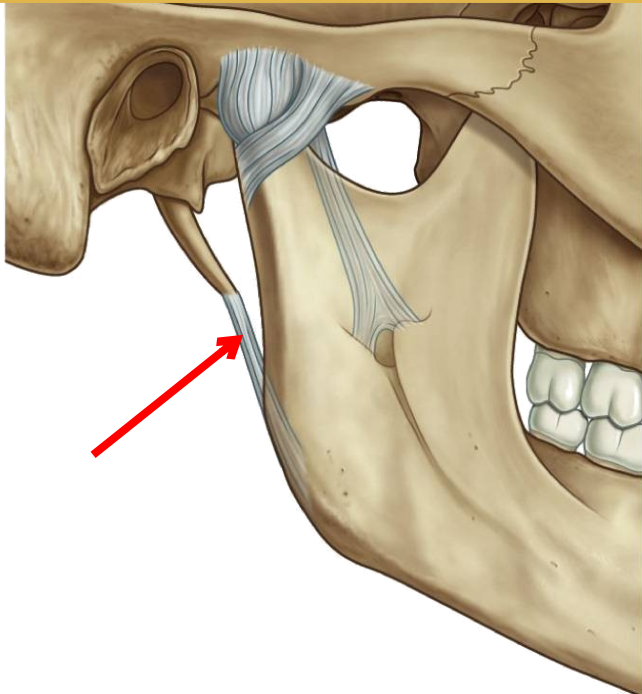


www.dentalcare.com

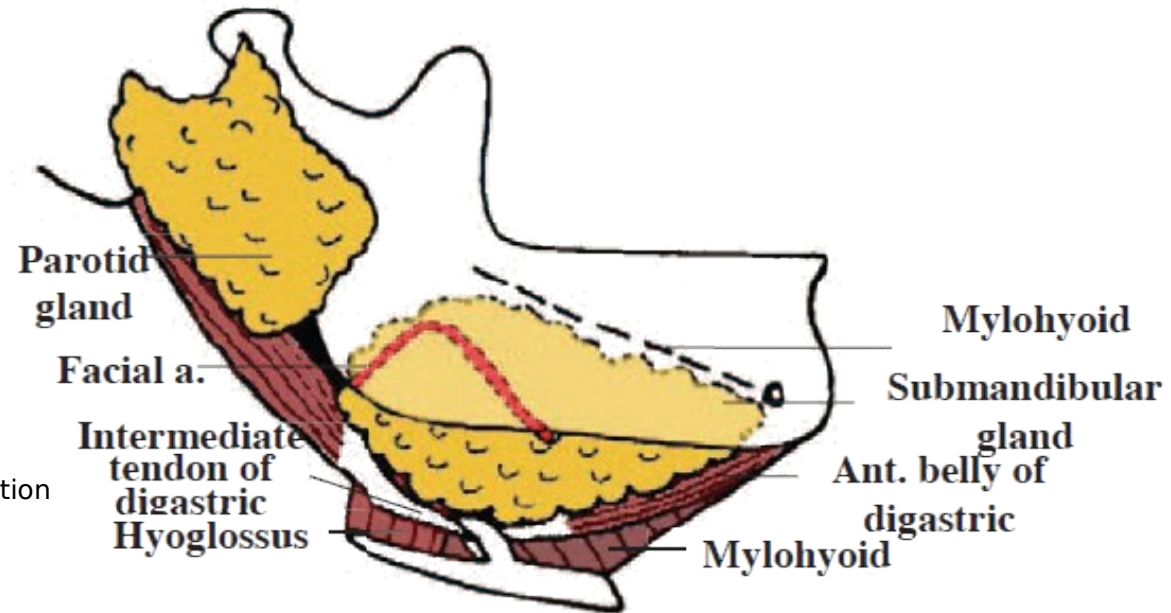
1. Superiorly: up to mylohyoid line.

2. Inferiorly: overlaps intermediate tendon of the digastric.

Submandibular Gland



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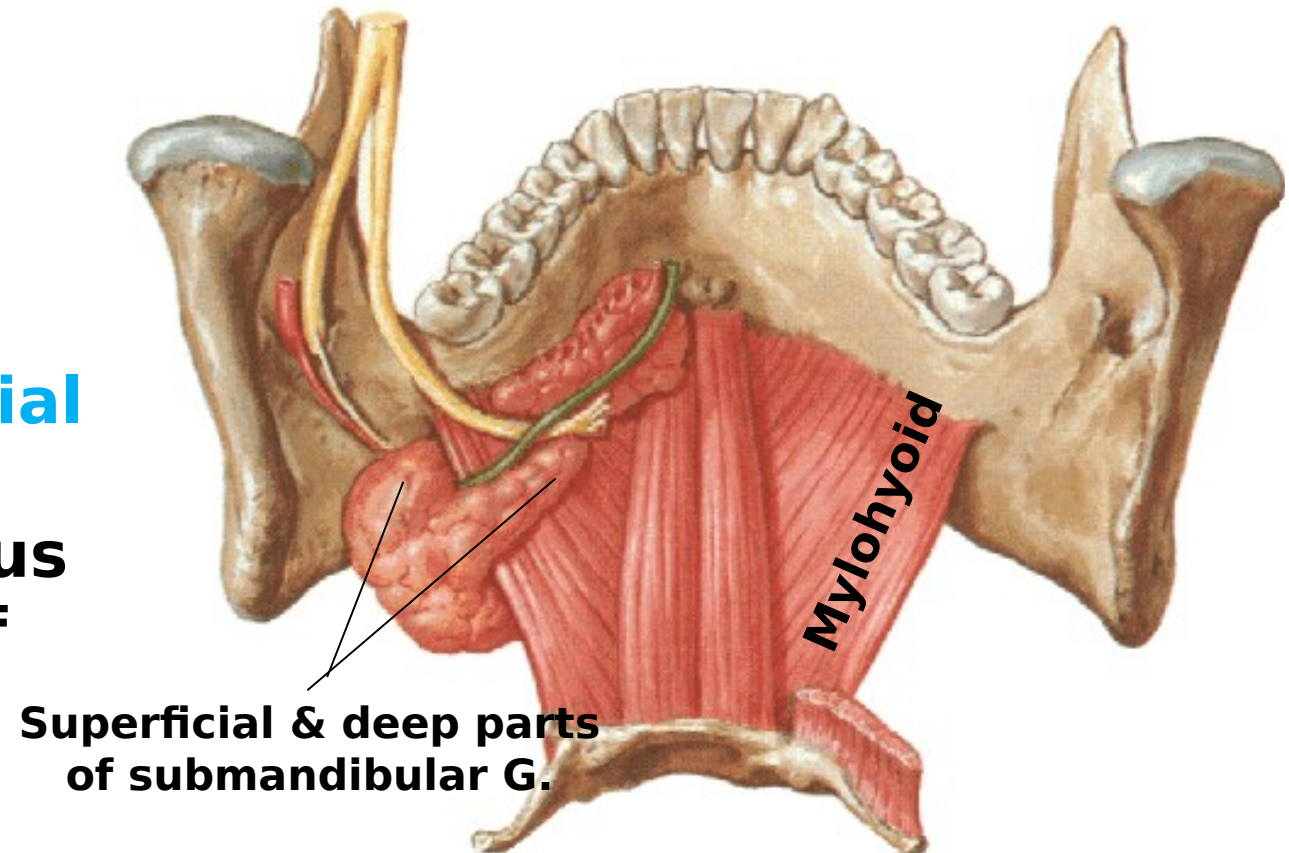
4. Posteriorly: reaches **Stylomandibular ligament** which separates it from the parotid gland.

Submandibular Gland



Parts:

Formed of a **large superficial part** and **small deep part** (the 2 parts are continuous at the posterior border of mylohyoid)



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Submandibular Gland



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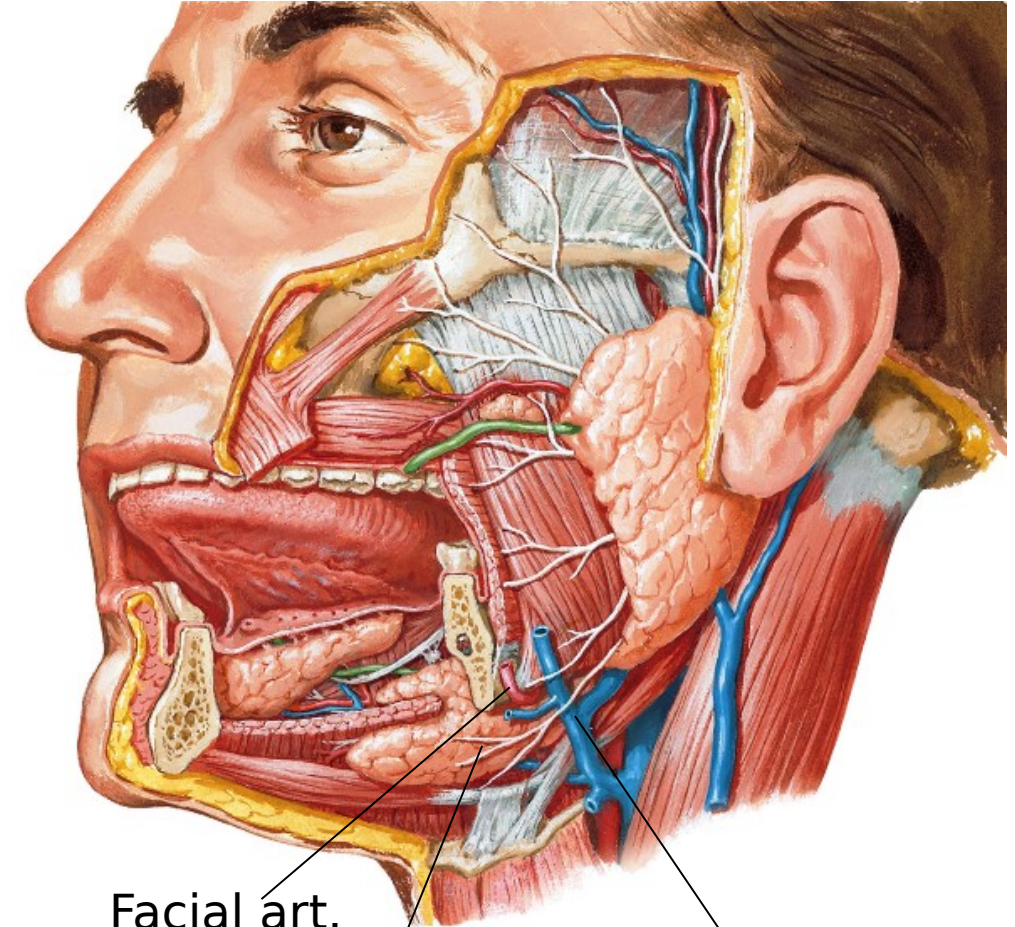
1) Superficial part:

Has 3 surfaces:

a. Lateral surface:

b. Inferior (superficial) surface:

c. Medial surface



Facial art.

cervical branch of facial n

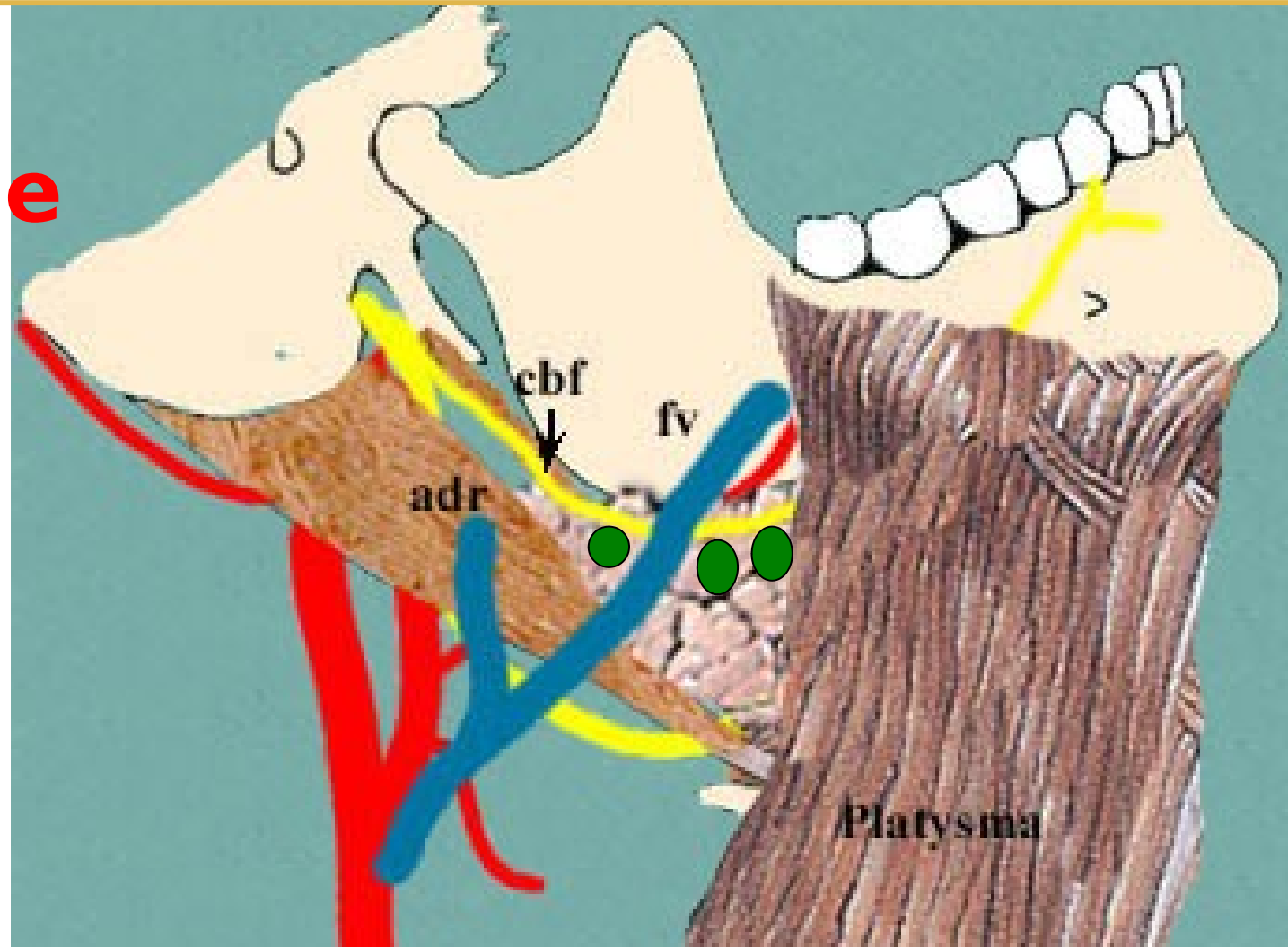
Facial vein

Submandibular Gland



Relations of the superficial surface

- Skin, superficial fascia, deep fascia.
- Submandibular L.N.
- Crossed by facial vein and cervical branch of facial nerve.



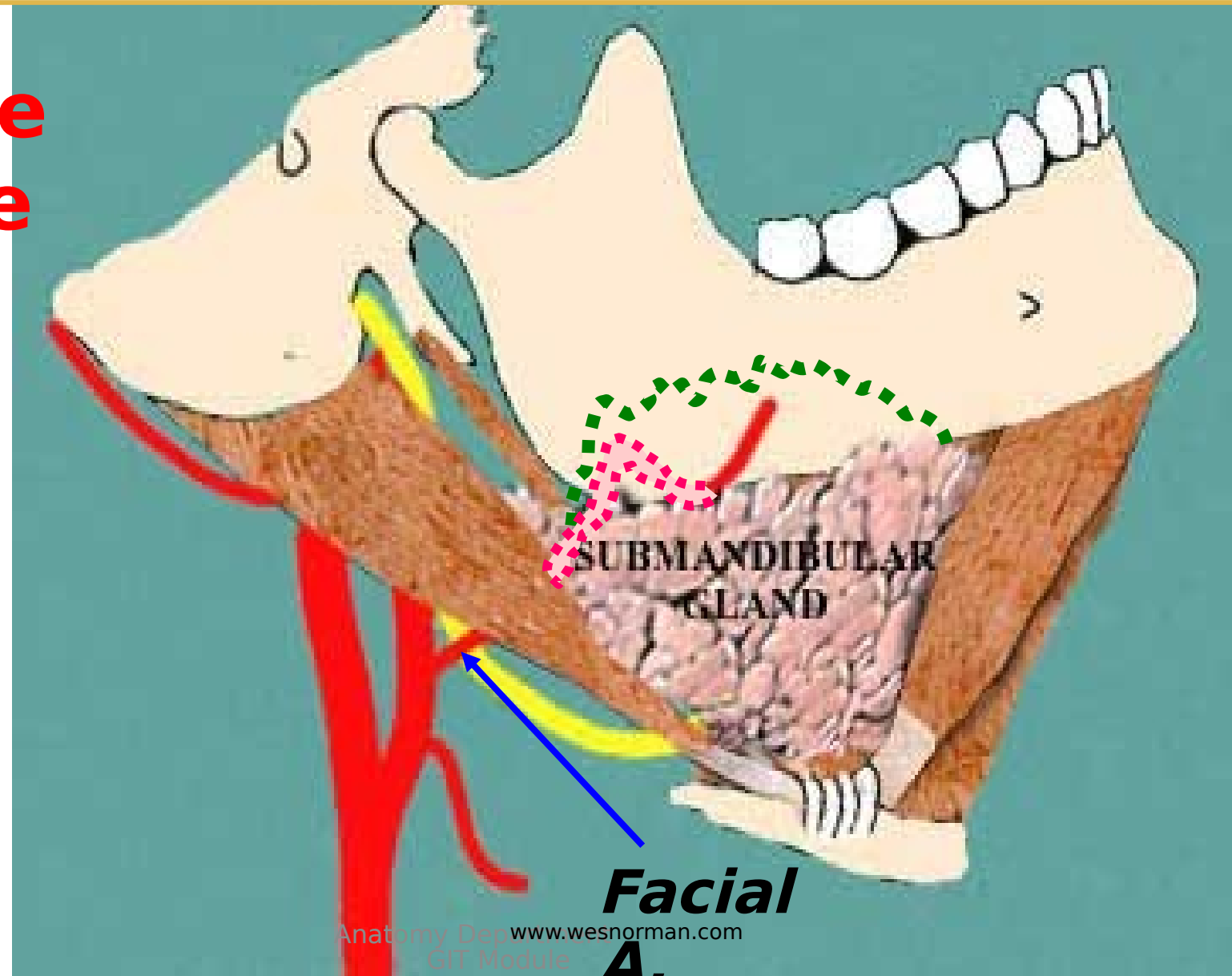
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Submandibular Gland



Relations to the Lateral Surface

- Submandibular fossa of mandible.
- Facial artery lies between the gland and the bone.



Submandibular Gland

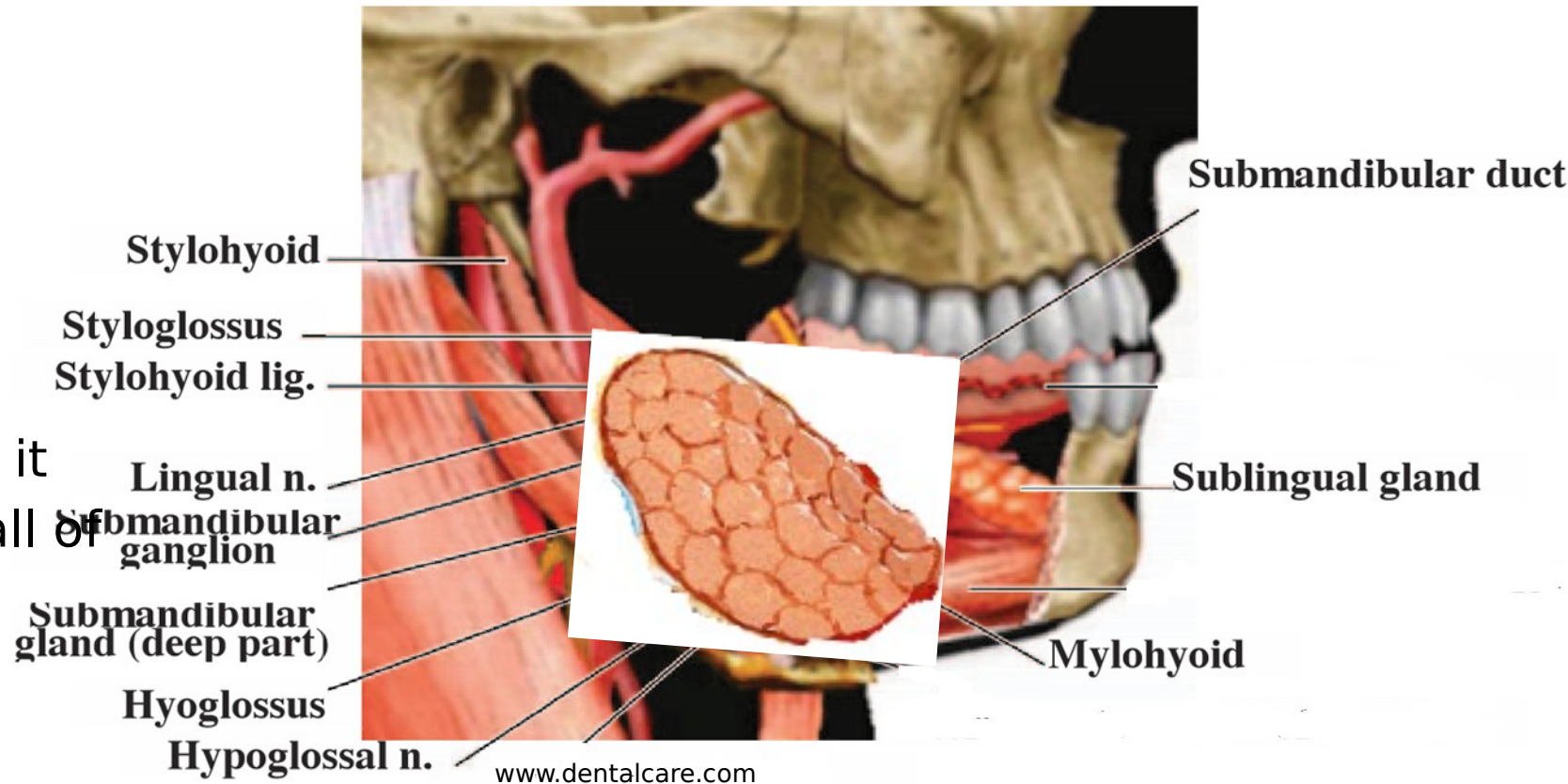


Relations to the Medial Surface

Anterior part: related to mylohyoid

Middle part: related to hyoglossus & structures lying on it

Posterior part: rests on wall of pharynx separated from it by 9th cranial n., styloglossus m., stylohyoid ligament.



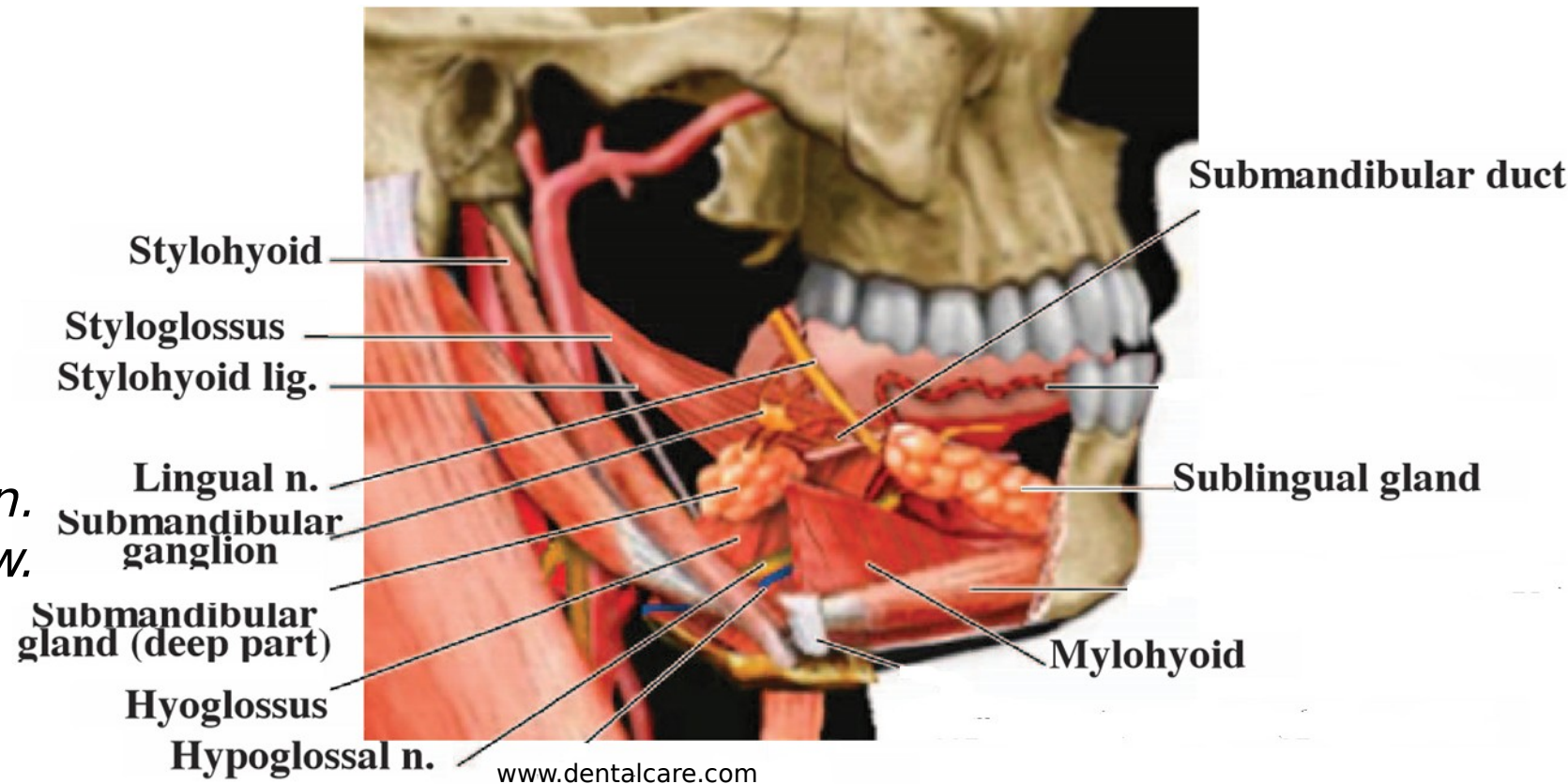
Submandibular Gland



2) Deep part:

between **2 Ms:** mylohyoid & hyoglossus *ms.*

between **2 nerves:** lingual *n.* above & hypoglossal *n.* below.



Facial covering

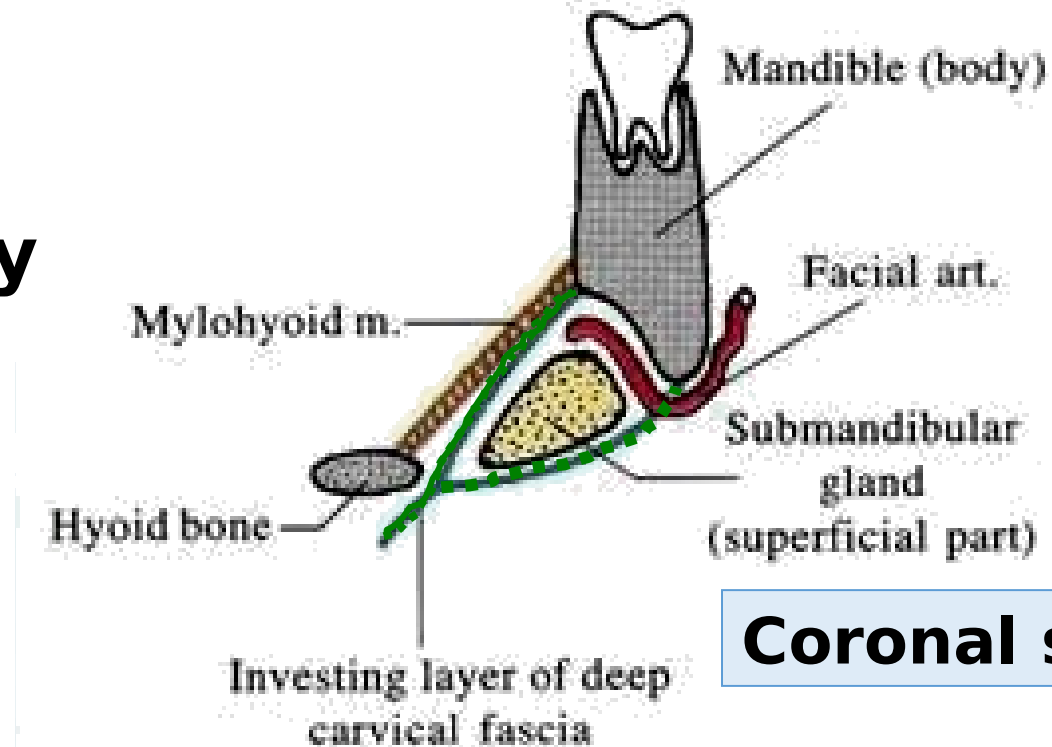
2 layers of deep cervical fascia:

a) Superficial layer

covers the gland inferiorly & attaches to the base of mandible.

b) Deep layer

covers the medial surface of the gland & attaches to mylohyoid line of the mandible



Coronal section

https://r.search.yahoo.com/_ylt=Awrj4hAnRtpd82IAJwpWBQx.;_ylu=X3oDMTBtdXBkbHJyBHNIYwNmcC1hdHRyaWIEc2xrA3J1cmw-RV=RE=1574614695/RO=11/RU=http%3a%2f%2fwww.earthslab.com%2fanatomy%2fdeep-cervical-fascia-fa

Submandibular Gland



Nerve supply:

- **Sensory:** lingual n.
- **Sympathetic:** plexus around facial a.
- **Parasympathetic:** postganglionic fibres from the submandibular ganglion

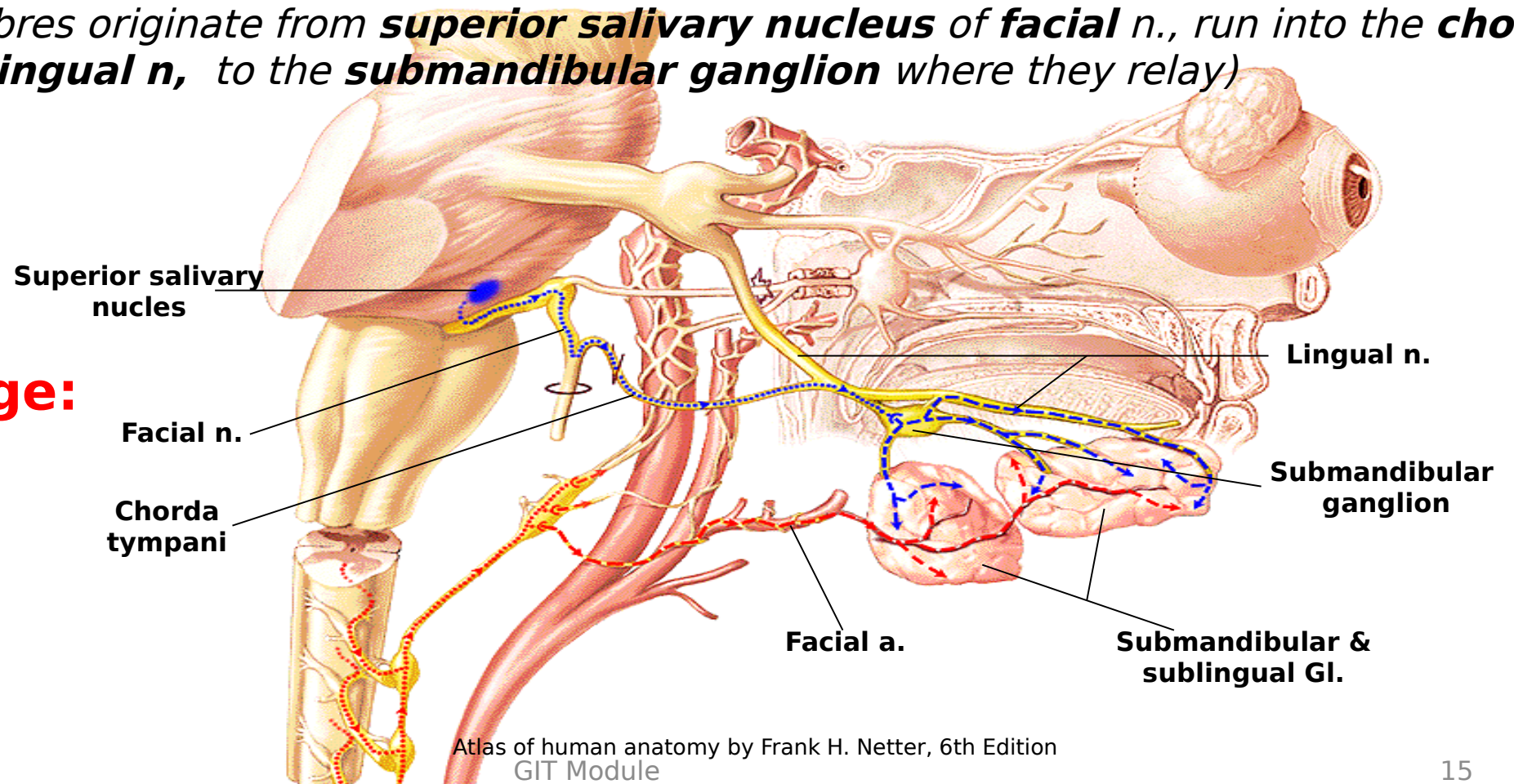
(the **preganglionic** fibres originate from **superior salivary nucleus** of **facial n.**, run into the **chorda tympani** which joins **lingual n.**, to the **submandibular ganglion** where they relay)

Blood supply:

Facial & lingual vessels

Lymphatic drainage:

Submandibular LN.

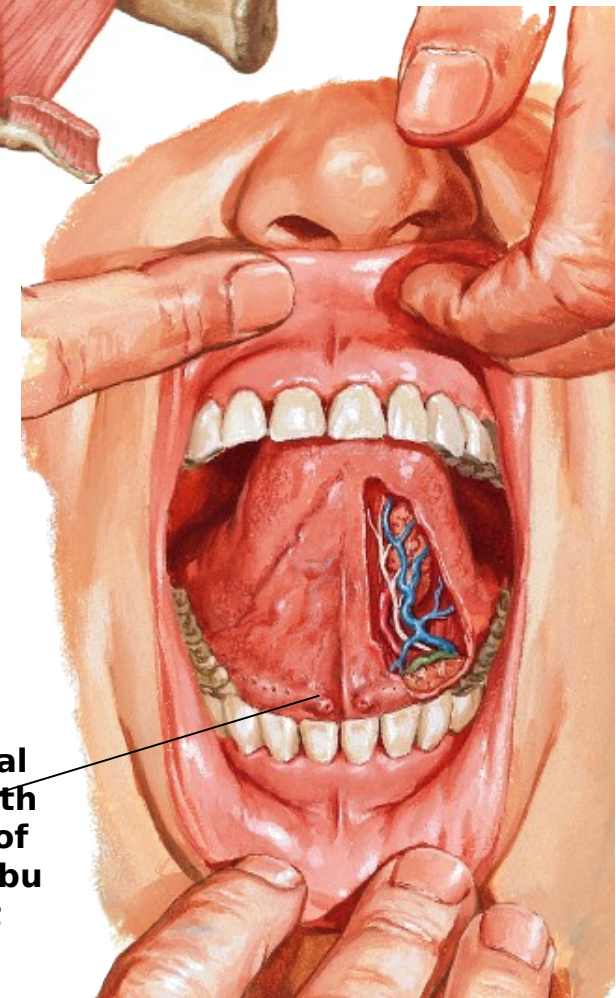
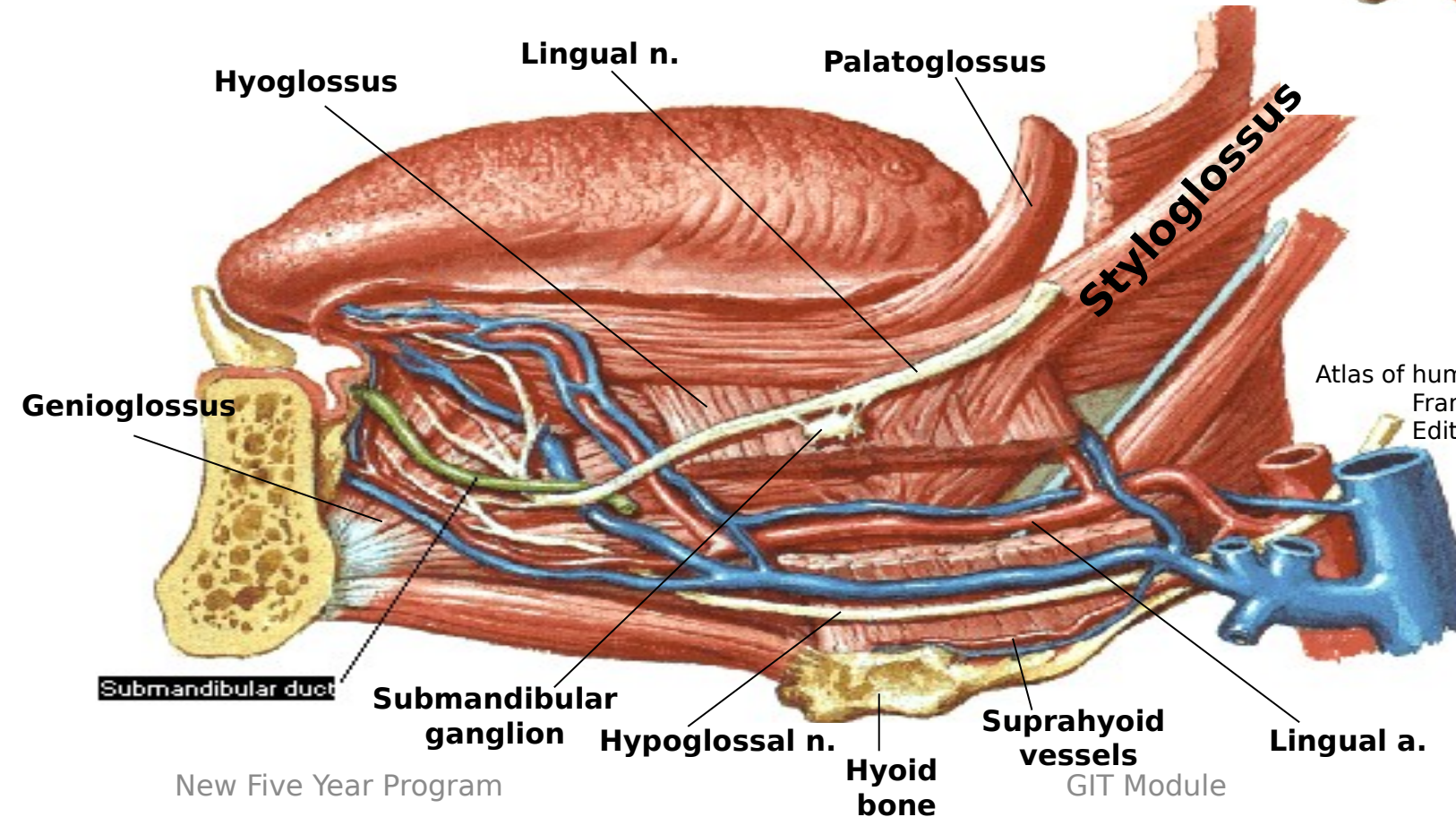
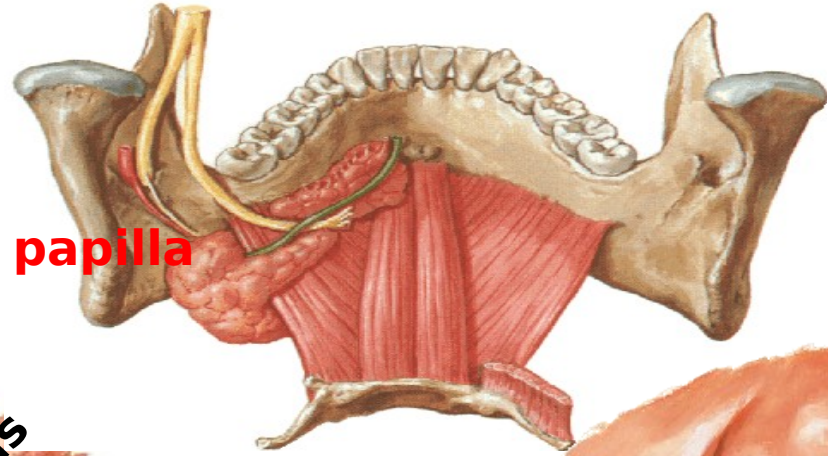


Atlas of human anatomy by Frank H. Netter, 6th Edition
GIT Module

Submandibular duct



- About **5 cm** long.
- Passes on **hyoglossus** (between lingual & hypoglossal n)
- **lingual n.** hooks around it from lat. to med.
- Runs between genioglossus & sublingual gland
- Opens in the floor of mouth on the summit of **sublingual papilla**



Submandibular duct

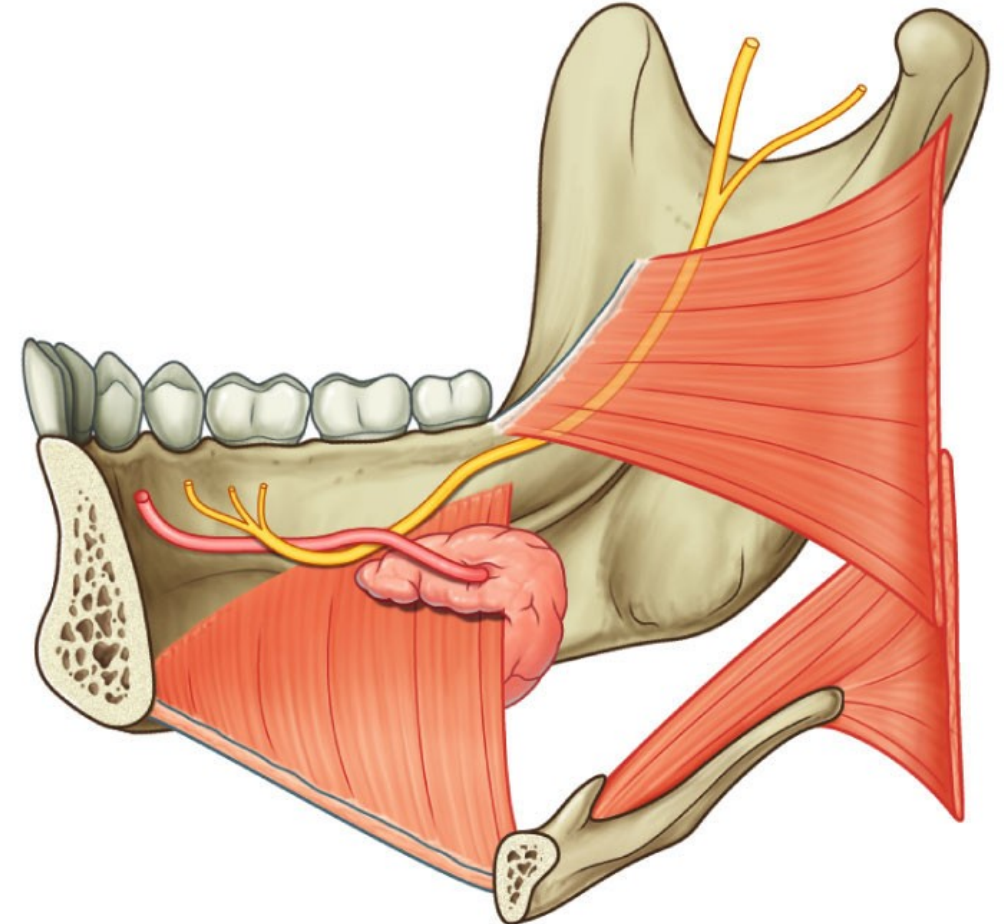


Relation between lingual nerve & Submandibular duct

**1. Lingual nerve is
lateral to the
duct.**

2. Then inferior.

3. Finally medial.



Gray's Anatomy for Students-4th Edition

Lecture Quiz



• Which of the following nerves supplies sensory fibres to the submandibular gland?

- a) Auriculotemporal nerve
- b) Lingual nerve
- c) Chorda tympani
- d) Inf alveolar nerve

Sublingual Gland



- **Position:**

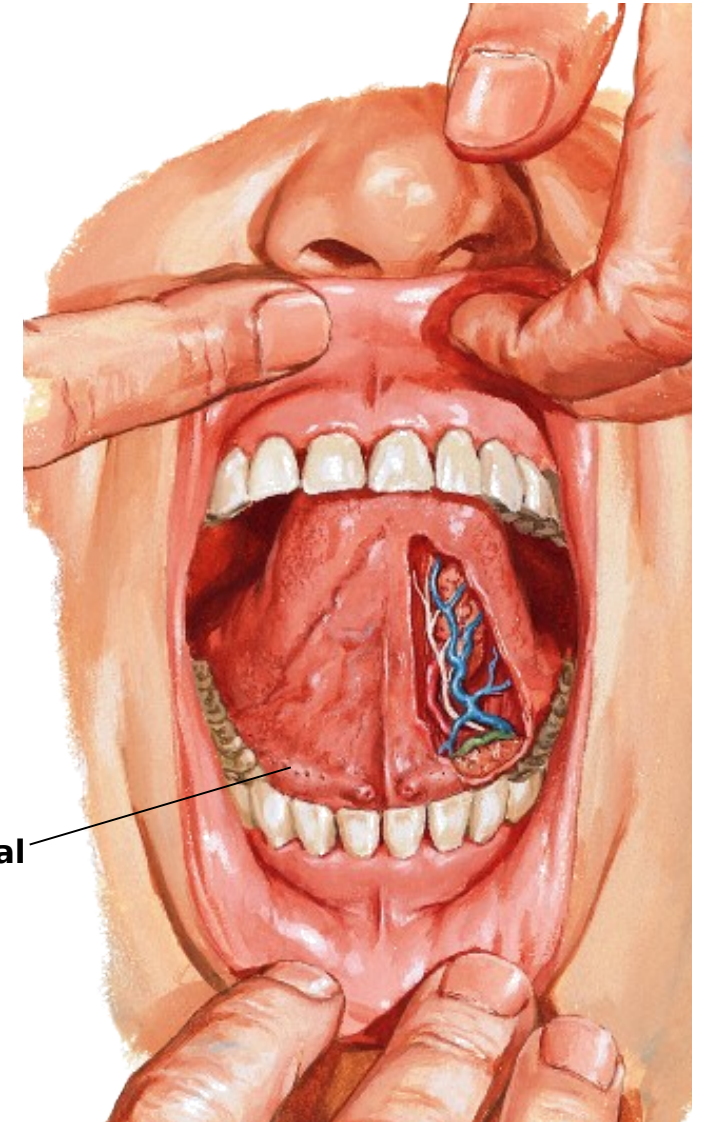
Lodged in **sublingual fossa** of mandible below mucosa of floor of mouth forming **sublingual fold**.

Size: is the smallest salivary gland.

- **Sublingual ducts:**

8-20 small ducts that open separately on summit of **sublingual fold** in the floor of mouth

Sublingual fold



Sublingual Gland



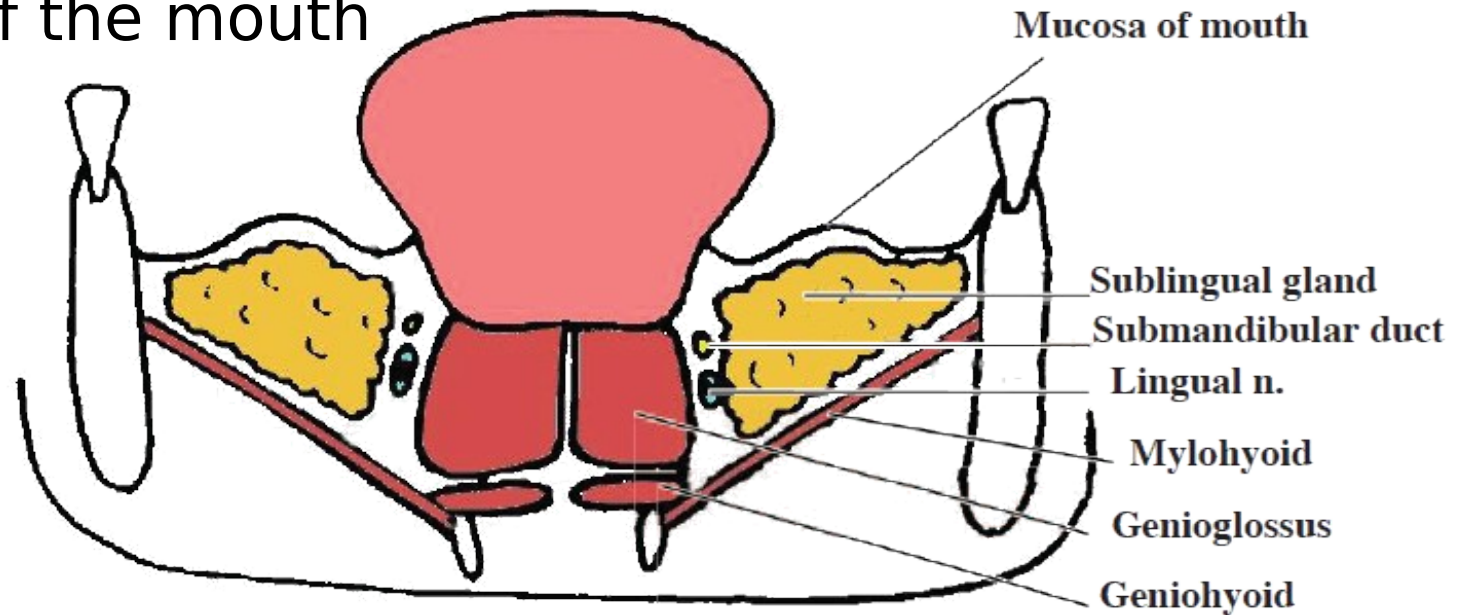
• Relations

Med: genioglossus, submandibular duct, lingual n.

Lat: sublingual fossa

Sup: mucosa of the floor of the mouth

Inf: mylohyoid m.

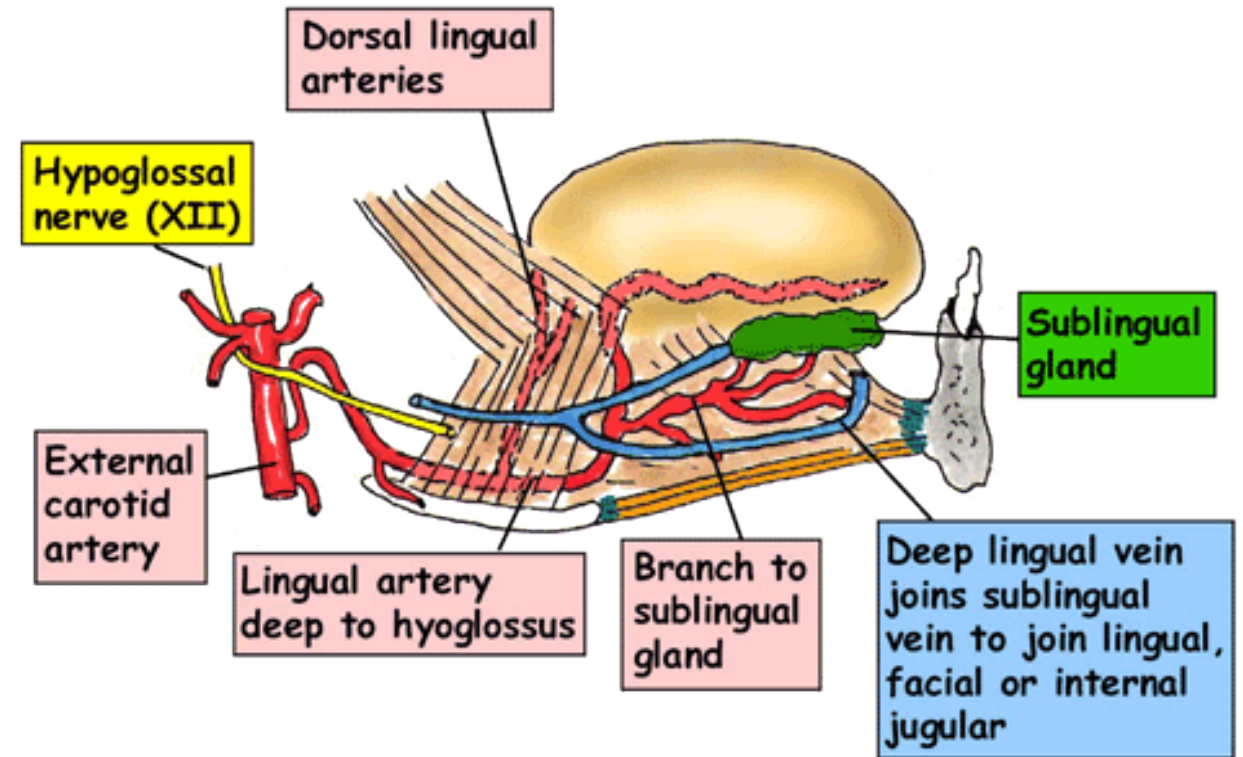


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Sublingual Gland



- **Blood supply:**
Sublingual branches of lingual *a.*
+ submental branches of facial *a.*
- **Nerve supply:**
As submandibular gland



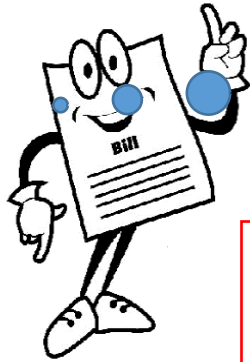
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Lecture Quiz



- Sublingual ducts opens into:
 - a) Frenulum of tongue
 - b) Sublingual fold
 - c) Sublingual papilla
 - d) Vestibule of mouth

Lecture Summary



Submandibular & Sublingual Glands

1. Describe the shape, , position, surfaces, relations of submandibular salivary gland
2. Describe course and site of opening of submandibular duct
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SUGGESTED TEXTBOOKS



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Thank you!